

## SCIENTIFIC NOTE

**NEW HOST RECORD FOR *UROSIGALPHUS MIMOSESTES* GIBSON AND FIRST RECORD OF *U. NEOMEXICANUS* CRAWFORD (HYMENOPTERA: BRACONIDAE) IN MÉXICO<sup>1</sup>**

Victor López-Martínez,<sup>2</sup> J. I. Figueroa-De la Rosa,<sup>3</sup> J. Romero N.,<sup>3</sup>  
J. A. Sánchez G.,<sup>4</sup> and S. Anaya R.<sup>3</sup>

Hymenopterous wasps are the principal parasitoids of bruchids, principally species of Braconidae, Encyrtidae, Eulophidae, Eupelmidae, Eurytomidae and Pteromalidae. From the braconid wasps, the genus *Glyptocolastes* Ashmead, *Heterospilus* Haliday, *Stenocorse* Marsh and *Urosigalphus* Ashmead have a wide range of bruchids as a natural host (Center and Johnson, 1976; Hetz and Johnson, 1988; Marsh 1979, 1997; Steffan 1981). High number of hosts reported for the hymenopterous is given principally for its "host specificity to a particular environment, not a particular beetle" (Hetz and Johnson, 1988).

Systematic and biological hosts associations of *Urosigalphus* species has been published for Gibson (1972a, 1972b, 1982; Hetz and Johnson, 1988), they stated that 19 species are distributed in Mexico. *Urosigalphus* belongs to the tribe Brachistini of subfamily Helconinae, and can be characterized as egg-larval parasitoid (Sharkey, 1996), which is reported in a undetermined species of *Urosigalphus* from Costa Rica (Traveset, 1991). According to Romero (2002), in his work about Mexican bruchids, 59 specimens of hymenopterous wasps that were reared from bruchids infesting Fabaceae pods and Convulvulaceae seeds, all belongs to the braconid genus *Urosigalphus*.

In the present work new distribution record and host associations data for *Urosigalphus (Bruchiurosigalphus) mimosestes* Gibson are given; besides new distribution records of *U. (Microurosigalphus) neomexicanus* Crawford for the country. The records presented here are based on material principally deposited in the Colección de Insectos del Centro de Entomología y Acarología, Montecillo (CEAM); and some material borrowed from Texas A&M University, College Station (TAMU) entomological collection.

<sup>1</sup> Received on July 11, 2002. Accepted on July 19, 2004.

<sup>2</sup> Facultad de Ciencias Agropecuarias, Universidad Autónoma del Estado de Morelos, Avenida Universidad 1001, Colonia Chamilpa, Cuernavaca, Morelos, C. P. 62210, México. E-mail: vilomar74@yahoo.com.mx.

<sup>3</sup> Taxonomía de Insectos, Instituto de Fitosanidad, Colegio de Postgraduados, km 36.5 carr. México- Texcoco, Montecillo, Edo. de México, C. P. 56230, México. E-mail: fisaac@colpos.mx.

<sup>4</sup> Unidad de Control Biológico, CIIDIR-IPN-Unidad Oaxaca, Hornos 1003, Santa Cruz Xoxocotlán, Oaxaca, C. P. 71230, México. E-mail: asanchez@colpos.mx.

**Subfamily Helconinae**  
***Urosigalphus (Bruchiurosigalphus) mimosestes***

The hypothesis of the host specificity to a particular environment of Hetz and Johnson (1988) can be partially corroborated with this work. *Urosigalphus mimosestes* has the capacity of attacking at least five species of bruchids associated to four host plants (Table 1), and probably have a wider host range.

This species has been reported from the Mexican states of Distrito Federal and Morelos (Gibson, 1972b; Figueroa and Romero, 2002), but now are reported from six Mexican states (Durango, Guanajuato, Hidalgo, Morelos, Nayarit, and Puebla) expanding the distribution of the species across the country.

Host plant	Bruchid host	Country	Reference
Not reported	<i>Mimosestes nubigens</i> (Motschulsky)	Honduras	Gibson (1972b)
<i>Lonchocarpus rugosus</i>	<i>Ctenocolum janzeni</i> Kingsolver	México	Figueroa and Romero (2002)
<i>Acacia farnesiana</i> , <i>A. schaffneri</i>	<i>M. nubigens</i>	México	New host plants records
<i>Ipomoea simulans</i>	<i>Megacerus callirhipis</i> (Sharp)	México	New host record
<i>Prosopis juliflora</i>	<i>Algarobius johnsoni</i> Kingsolver, <i>Mimosestes amicus</i> (Horn)	México	New host record

Table 1. Host records and distribution of *Urosigalphus (B.) mimosestes* in Mexico.

**Material Examined:** MÉXICO. DURANGO: 1 ♀, Vicente Guerrero, San Francisco Javier, 21-XII-1995, col. J. Romero N., reared seed *Prosopis juliflora*, parasitoide del brúquido *Algarobius johnsoni* Kingsolver. GUANAJUATO: 1 ♂, Irapuato, El Copal, 18-VIII-1994, Salas A. D., reared seed *Prosopis* sp., parasitoide del brúquido *Algarobius johnsoni* Kingsolver; 1 ♀ and 1 ♂, same data but 21-VII-1994, Salas A. D.; 3 ♀ and 3 ♂, same data but 22-VIII-1994; 2 ♀ and 2 ♂, same data but 17-IX-1994, Arévalo A.; 4 ♀ and 1 ♂, km 3 carr. San José Iturbide-Victoria, 2-VIII-1996, col. J. Romero N., *Acacia schaffneri* (S. Watson) F. J. Herm., parasitoide del brúquido *Mimosestes nubigens* (Motschulsky); 1 ♀ and 1 ♂, San Luis de la Paz, 11-IV-1996, José A. Sánchez G.; 1 ♀, Yiuistis, 10-XII-1995, José A. Sánchez G. HIDALGO: 4 ♀ and 7 ♂, 3 mill. N Las Trancas, Parque Nacional Los Mármoles, 20-VII-1999, 6250 msnm, col. J. Romero N., reared seed JRN#240/99 *Acacia farnesiana* (L.), parasitoide del brúquido *Mimosestes nubigens* (Motschulsky); 3 ♀ and 4 ♂, Zindejeb, Tasquillo, 20-VII-1999, 1830 msnm, col. J. Romero N., reared seed JRN#239/799 *Prosopis juliflora*, parasitoide del brúquido *Mimosestes amicus* (Horn), 20° 33' 04" N 99°17' 44" W. MORELOS: 1 ♀, Tlalquitenango, La Mezquitera, 2-II-1997, 903 msnm, col. J. Romero N., reared seed JRN#201/97 *Prosopis juliflora*, parasitoide del brúquido *Algarobius johnsoni* Kingsolver. NAYARIT: 1 ♂, 15 mi. SE Tepic, 2-III-1973, ca. 4000, C. D. Johnson collector, reared seed CDJ#303/73 *Ipomoea simulans*, emerged by 25-IX-1973, parasitoide del brúquido *Megacerus callirhipis* (Sharp). PUEBLA: 1 ♀, 6 km SW Acatepec, 17-VII-1996, 1900 msnm, Jesús Romero N.

***Urosigalphus (Microurosigalphus) neomexicanus* Crawford**

At this time, no biological data has been published of this species, but this reports an increasing number of *Urosigalphus* in México (19 to 20). This records are based upon 17 specimens examined, extending the distribution of the braconid to the Mexican states of Guerrero, Oaxaca and Puebla. Oaxaca represents its southernmost record.

This species was originally described from New Mexico, USA (Crawford, 1914). These have since been recorded from Arizona, Colorado, Illinois, Iowa, Kansas, Missouri, and Texas (Martin, 1956; Gibson, 1972a; Whitfield and Lewis, 2001). Future additional collections will help determine host and plant relations.

**Material Examined:** MÉXICO. GUERRERO: 1 ♂, 15 mi. W. Chichihualco, 15-VII-1984, Elev. Aprox. 1500', J. B. Woolley; 1 ♂, 5.4 mi. Southwest La Laguna, 14-VII-1985, Jones & Schaffner; 1 ♀ and 12 ♂ 6.2 mi SW Xochipala, 8-VII-1982, 5670 ft, R. Wharton. OAXACA: 1 ♂, 3 mi. se. Matatlan (Microondas road), 17-VII-1987, elev. 6650 ft., Kovarik & Schaffner. PUEBLA: 1 ♀, 6 km SW Acatepec, 17-VII-1996, 1900 m, Jesús Romero N.

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